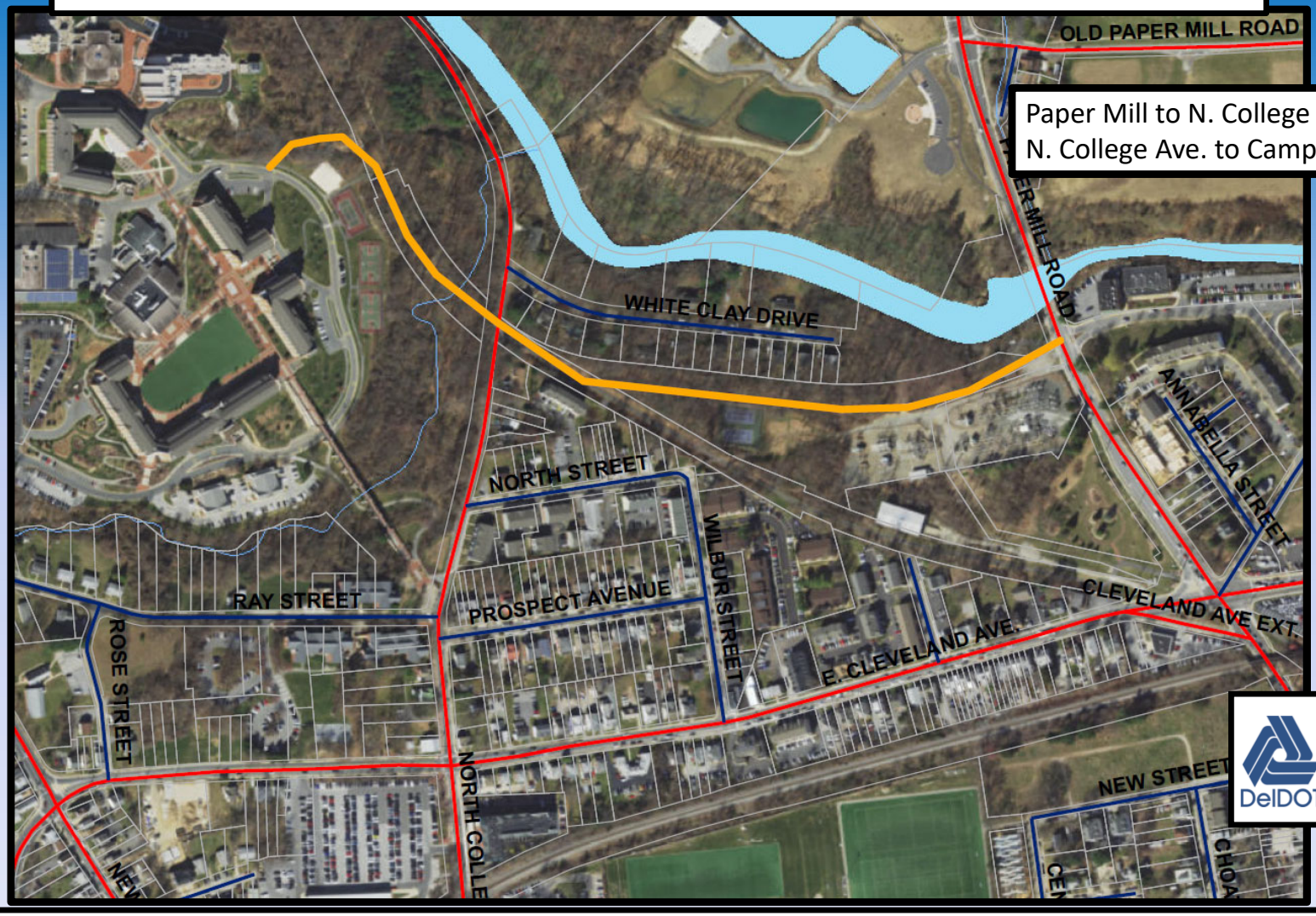
Newark TID – Potential Connection Assessment



Paper Mill to N. College Ave: ~1700'
N. College Ave. to Campus Road: ~900'

DelDOT | Regional Systems Planning

April 12, 2021

Analysis Method:

DelDOT Travel Demand Model (CUBE Voyager)

"Select Link Analysis":

Routine Identifies Starting and Ending Points of Trips ("Origin – Destination Patterns") for a Road Segment; Stores them for Further Analysis.

"Build/No-Build Analysis":

Essentially Above, with an Additional Step:

Build Element:

a) Routine Identifies Trips Using a Potential Capacity Improvement (such as New Road, Widened or Upgraded Road)

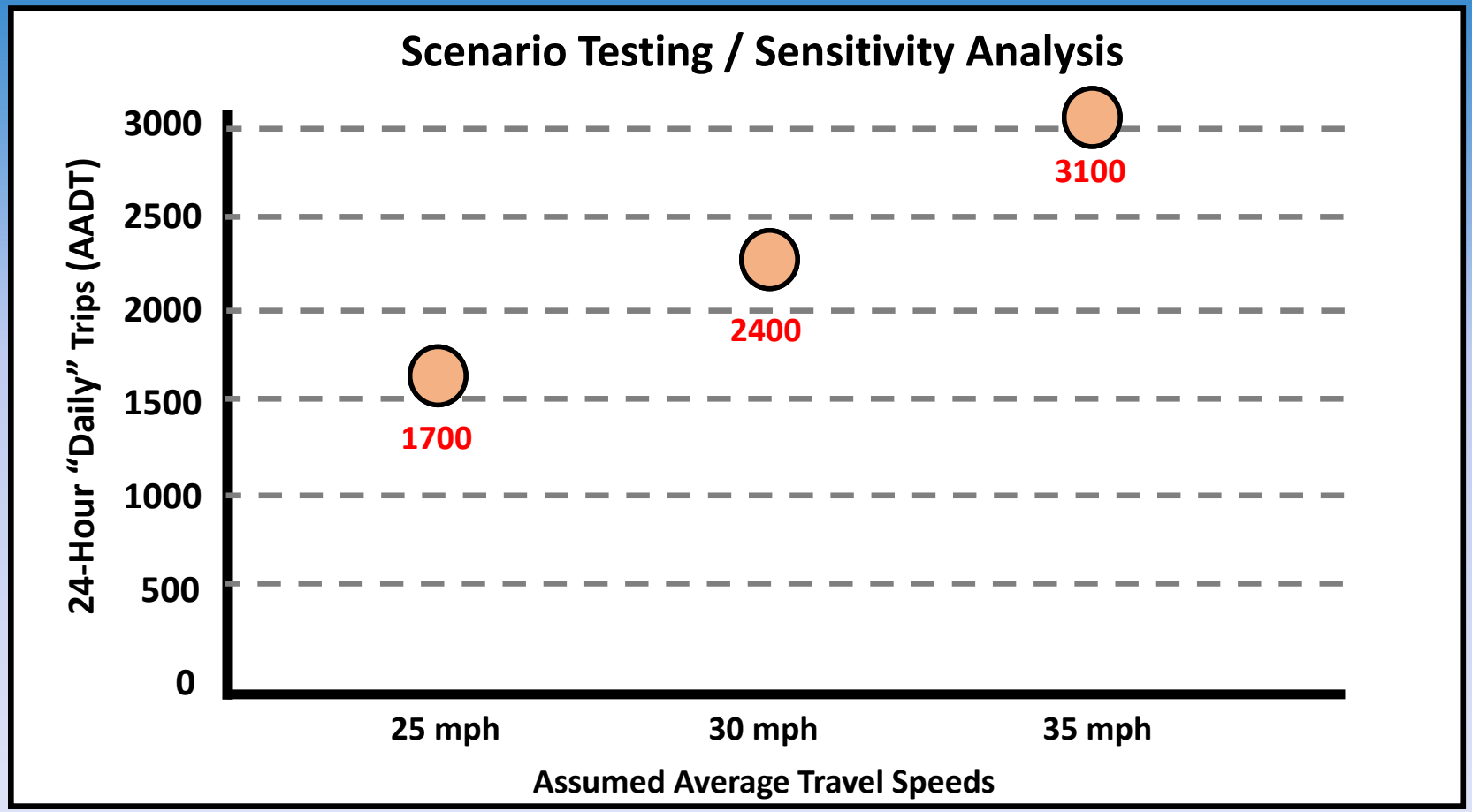
b) Attaches Unique Record Number to Each Trip.

No-Build Element:

a) Then Locates Corresponding Record Numbers, in Same Model When Run Without Potential Improvement.

Allows Assessment of Trip Diversion & Induced / Potential Travel Shifts

Results (Potential Segment between Paper Mill Rd & N. College Ave):



Conclusions

1) Daily Trip Diversion:

	Come From:	30 mph
Possum Park/Paper Mill	5%	120
Cleveland Avenue	60%	1440
East Main Street	10%	240
East Delaware Avenue	10%	240

2040 Trips Diverted FROM Routes

~360 Trips Induced TO Connection

2) Effects of Diversion:

Shift of ***Up to 1440 Daily Trips*** (130 AM Peak, 140 PM Peak) from Cleveland Avenue may have **Small Improvements** or Likely Benefits to Overall Travel.

Shifts on Other Routes **Not Significant to Improve LOS.**

Newark TID Transportation Improvement Ideas

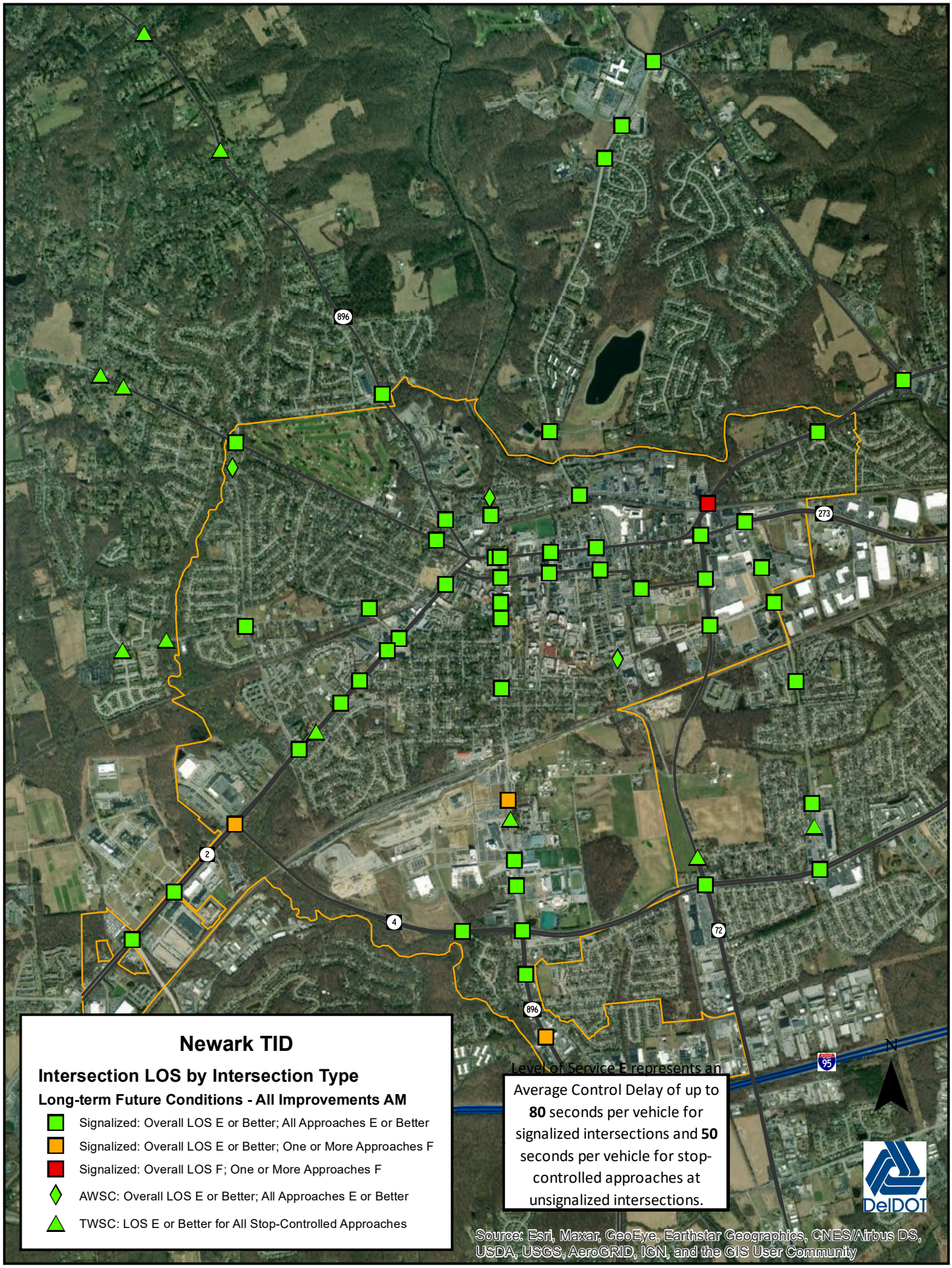
Short-term improvements scenario

- **Elkton Rd improvements from Maryland line to Casho Mill Rd (under construction as of spring 2020):** Reconstruct concrete pavement and widen to provide a third eastbound through lane between Otts Chapel Road and SR 4. Provide for upgraded bicycle and pedestrian facilities, including a 10' wide multi-use path. (included in modeling but not TID-CTP)
- **SR 4, Elkton Road to SR 896, improvements (construction to start 2025):** Reconstruct concrete pavement and widen to provide two continuous lanes on SR 4 in both directions. Widen existing structures over Christina River and railroad. Improve shared-use path on north side so bike LTS is 1 or 2.
- **SR 896 improvements, between Old Chestnut Hill Rd. and Marvin Dr:** add additional NB and SB third through lanes; modify median curb to increase left turn lane storage to 600 ft at Old Chestnut Hill Rd. Upgrade existing curb ramps/pedestrian crossings at SR896 and SR4 intersection to shared-use path crossings. Replace sidewalk between SR4 and Marvin Dr. with shared-use path (grant opportunity for east side)

Long-term improvements scenario

- **S College Avenue and Welsh Tract Rd intersection:** Widen EB Welsh Tract Rd so right turn lane onto S College Avenue can be lengthened (190 ft). Add a WB left turn lane (145 ft) and turn shared through and left to only a through lane. Lengthen SB left turn lane (475 ft). Widen SR896 so that NB left turn lane can be lengthened (400 ft).
- **S College Avenue and West Park Place intersection:** add NB right turn lane (120 ft). Check ped. crossing time. And consider no right turn on red. Consider scramble- all ped. signal.
- **SR 2/Elkton Rd & SR 4/Christina Pkwy intersection:** Widen Suburban Plaza approach to add a second SB through lane. (425 ft, or back to shopping center entrance)
- **Paper Mill Rd & Thompson Station Rd/Possum Park Rd intersection:** Extend WB left turn lane (490 ft).
- **SR 273/Newark Christiana Rd & Marrows Rd intersection:** Extend NB right turn lane (310 ft)
- **SR 72/Library Ave & SR 4/Chestnut Hill Rd intersection:** Extend EB left turn lanes (410 ft for leftmost turn lane, 450 ft for other left turn lane); Widen so that two SB through lanes extend back to Kensington Lane. Dualize and signalize right turns from SR72 onto SR4.
- **SR72/Library Ave & Wyoming Rd. intersection:** Extend EB left turn lane (480 ft, to first driveway); widen to add a second WB through lane (685 ft total, from first driveway east of intersection, this driveway is about 278 ft east of the WB stopline).
- **S Chapel St. and Wyoming Rd. intersection:** Install single-lane roundabout.
- **New roadway connection #1, from Suburban Plaza/SR4 north to Barksdale Rd.:** This is part of the previously known west connector. Other than Suburban Plaza, the rest of the roadway is proposed to run through parcels owned by the City of Newark. There is a stream corridor and trail, and wetlands, to avoid. Build with shared-use path on at least one side. Should be high priority improvement. Elevated to avoid floodplain, scenic route. Bike/ped as separate, closer to river
- **Additional bicycle improvements:** Along Wyoming Avenue; connecting Casho Mill Rd. and Nottingham Rd. intersection to Old Casho Mill Rd. and making intersection bike friendly; new

connection from White Clay Creek Bridge to U of DE campus. Add trail connections to trail system near Paper Mill Rd. & Thompson Station Rd/Possum Park Rd intersection. Include bicycle system improvements along SR72 with any other DelDOT improvement projects.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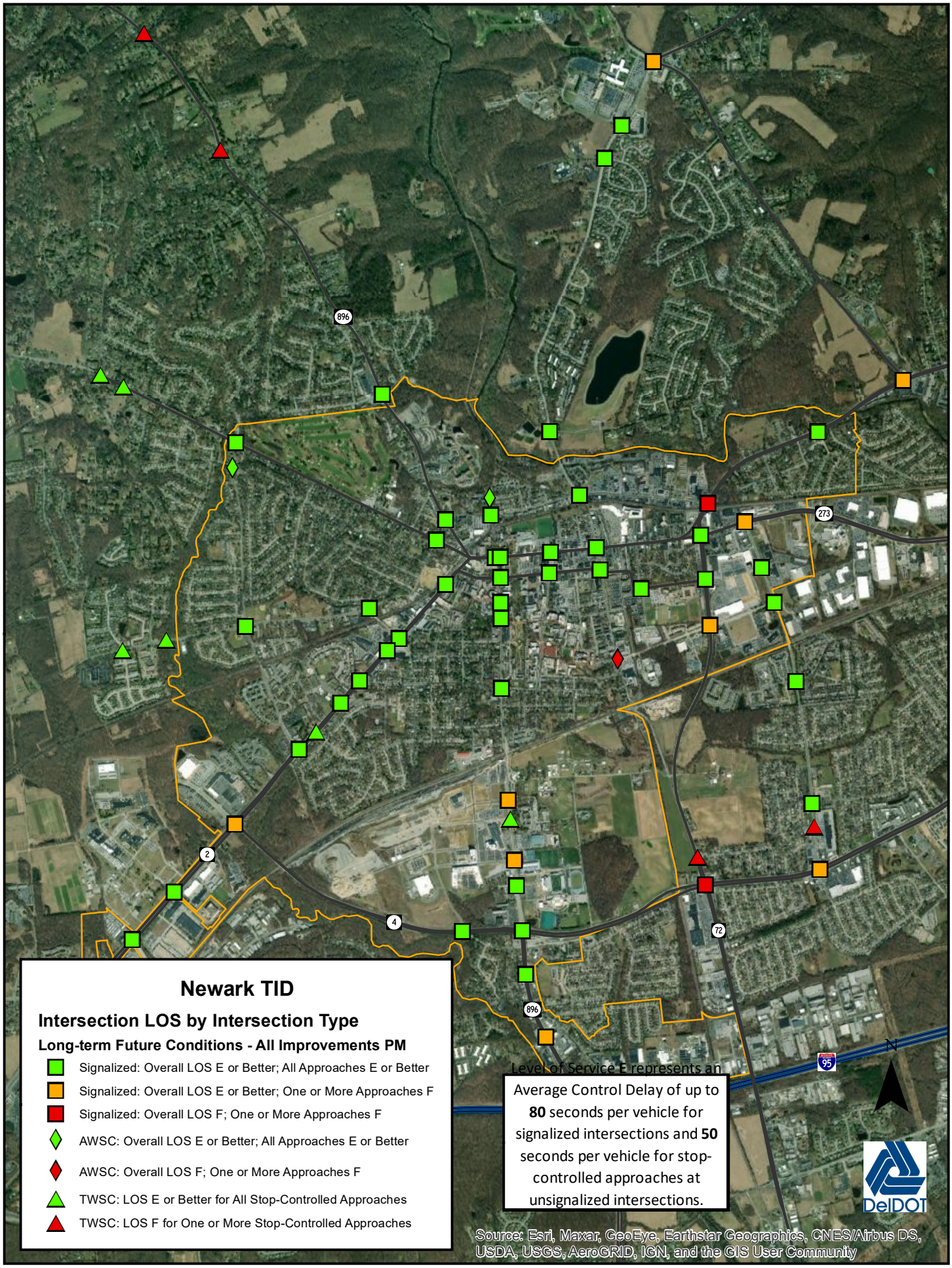
Newark TID
Intersection LOS by Intersection Type
Long-term Future Conditions - All Improvements AM
Signalized: Overall LOS E or Better; All Approaches E or Better
Signalized: Overall LOS E or Better; One or More Approaches F
Signalized: Overall LOS F; One or More Approaches F
AWSC: Overall LOS E or Better; All Approaches E or Better
TWSC: LOS E or Better for All Stop-Controlled Approaches
Level of Service E represents an Average Control Delay of up to 80 seconds per vehicle for signalized intersections and 50 seconds per vehicle for stop-controlled approaches at unsignalized intersections.
DelDOT
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community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Intersection LOS by Intersection Type
Long-term Future Conditions - All Improvements PM
Signalized: Overall LOS E or Better; All Approaches E or Better
Signalized: Overall LOS E or Better; One or More Approaches F
Signalized: Overall LOS F; One or More Approaches F
AWSC: Overall LOS E or Better; All Approaches E or Better
AWSC: Overall LOS F; One or More Approaches F
TWSC: LOS E or Better for All Stop-Controlled Approaches
TWSC: LOS F for One or More Stop-Controlled Approaches
Level of Service E represents an Average Control Delay of up to 80 seconds per vehicle for signalized intersections and 50 seconds per vehicle for stop-controlled approaches at unsignalized intersections.
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Int #	Intersection Name	In/Out Participant Boundary	Control Type	Signal Permit #	Existing Conditions - Level of Service (Revised, Signal Splits Not Optimized) AM Int. LOS	AM Delay (sec)	AM Approach LOS	PM Int. LOS	PM Delay (sec)	PM Approach LOS	Existing Conditions - Level of Service (Revised, Signal Splits Optimized) AM Int. LOS	AM Delay (sec)	AM Approach LOS	PM Int. LOS	PM Delay (sec)	PM Approach LOS
1	SR 896/South College Ave & Welsh Tract Rd	Out	Signal	N434T	E	57.0	**EB-F**; WB-E; NB-C; SB-C	D	37.3	**EB-F**; **WB-F**; NB-C; SB-C	D	44.7	**EB-F**; WB-E; NB-C; SB-C	D	37.6	**EB-F**; **WB-F**; NB-C; SB-C
2	SR 896/South College Ave & Chestnut Hill Rd	Out	Signal	N435T	D[1]	38.4	NB-C; SB-B; NE-E; SW-E	D[1]	45.6	NB-D; SB-D; NE-D; SW-E	C[1]	26.0	NB-A; SB-C; NE-D; SW-E	D[1]	36.4	NB-B; SB-D; NE-D; SW-E
3	SR 896/South College Ave & SR 4/Christina Pkwy	Out	Signal	N436T	D	49.2	EB-E; WB-E; NB-D; SB-D	E	61.2	EB-E; WB-E; NB-D; SB-E	D	48.3	EB-E; WB-D; NB-D; SB-D	E	60.6	EB-E; WB-E; NB-D; SB-E
4	SR 896/South College Ave & Marvin Dr	Out	Signal	N467T	B[1]	10.7	EB-D; WB-C; NB-A; SB-B	B[1]	14.9	EB-A; WB-E; NB-A; SB-B	A[1]	6.6	EB-D; WB-C; NB-A; SB-A	B[1]	11.5	EB-A; WB-D; NB-A; SB-B
5	SR 896/South College Ave & Discovery Blvd	Out	Signal	N016P	A	4.3	EB-E; WB-E; NB-A; SB-A	B	19.5	**EB-F**; **WB-F**; NB-C; SB-A	A	2.3	EB-E; WB-E; NB-A; SB-A	A	7.6	**EB-F**; WB-E; NB-A; SB-A
6	SR 896/South College Ave & Healthy Way	Out	TWSC				EB-B (10.3)			EB-B (14.6)			EB-B (10.3)			EB-B (14.6)
7	SR 896/South College Ave & Inspiration Blvd	Out	Signal	N015P	A	5.6	**EB-F**; WB-E; NB-A; SB-A	C	20.1	**EB-F**; **WB-F**; NB-A; SB-B	A	5.6	**EB-F**; WB-E; NB-A; SB-A	C	22.2	**EB-F**; **WB-F**; NB-A; SB-B
8	SR 896/South College Ave & W. Park Place	In	Signal	N438T	C	34.0	EB-D; WB-D; NB-C; SB-C	D	44.0	EB-D; WB-E; NB-C; SB-C	C	32.7	EB-C; WB-C; NB-D; SB-C	D	37.1	EB-D; WB-C; NB-D; SB-D
9	SR 896/South College Ave & Kent Way	In	Signal	N018P	A[1]	9.5	NB-A; SB-A	B[1]	12.3	NB-A; SB-B	A[1]	7.8	NB-A; SB-A	B[1]	10.3	NB-A; SB-B
10	SR 896/South College Ave & Amstel Ave	In	Signal	N448T	A	0.5	EB-A; NB-A; SB-A	A	0.9	EB-A; NB-A; SB-A	A	0.5	EB-A; NB-A; SB-A	A	0.9	EB-A; NB-A; SB-A
11	SR 896/South College Ave & Delaware Ave	In	Signal	N428T	C[1]	22.7	EB-B; NB-E; SB-B	C[1]	27.1	EB-B; NB-E; SB-B	C[1]	22.2	EB-B; NB-D; SB-B	C[1]	24.9	EB-B; NB-D; SB-B
12	East Main St & SR 896/South College Ave	In	Signal	N416T	B[1,2]	16.8	WB-B; NB-C	C[1,2]	22.0	WB-B; NB-C	B[1,2]	17.5	WB-B; NB-C	C[1,2]	23.1	WB-C; NB-C
13	East Main St & North College Ave	In	Signal	N416T	E[1]	73.3	WB-A; **SB-F**	**F**[1]	148.2	WB-A; **SB-F**	B[1]	11.9	WB-A; SB-D	B[1]	11.5	WB-A; SB-E
14	North College Ave & Cleveland Ave	In	Signal	N433T	B[1]	11.4	EB-B; WB-A; NB-E; SB-E	C[1]	20.1	EB-B; WB-A; **NB-F**; **SB-F**	B[1]	11	EB-B; WB-A; NB-E; SB-E	B[1]	18.9	EB-B; WB-A; **NB-F**; SB-E
15	North College Ave & Ray St	In	AWSC		A	7.4	WB-A; NB-A; SB-A	A	7.6	WB-A; NB-A; SB-A	A	7.4	WB-A; NB-A; SB-A	A	7.6	WB-A; NB-A; SB-A
16	SR 4/Christina Pkwy & Science Blvd	Out	Signal	N441T	B	15.9	EB-B; WB-B; SB-C	B	19.4	EB-B; WB-C; SB-C	A	4.5	EB-A; WB-A; SB-D	A	8.5	EB-A; WB-A; SB-D
17	SR 2/Elkton Rd & Otts Chapel Rd	Out	Signal	N181	D	48.7	SE-E; **NW-F**; NE-B; SW-A	D	41.1	SE-D; NW-E; NE-C; SW-D	C	28.0	SE-E; NW-D; NE-C; SW-A	D	36.5	SE-E; NW-E; NE-C; SW-C
18	SR 2/Elkton Rd & Interchange Blvd	Out	Signal	N017P	A	2.4	SE-E; NW-E; NE-A; SW-A	C	23.1	SE-D; **NW-F**; NE-B; SW-B	A	2.4	SE-E; NW-E; NE-A; SW-A	C	20.1	SE-E; NW-E; NE-B; SW-B
19	SR 2/Elkton Rd & SR 4/Christina Pkwy	Out	Signal	N153	C	28.7	SE-E; NW-D; NE-B; SW-C	**F**	115.3	**SE-F**; **NW-F**; **NE-F**; SW-D	C	33.7	SE-E; NW-E; NE-B; SW-C	**F**	104.1	SE-E; **NW-F**; **NE-F**; SW-D
20	SR 2/Elkton Rd & Casho Mill Rd	In	Signal	N639	B[1]	17.4	SE-C; NE-B; SW-B	**F**[1]	93.1	SE-B; **NE-F**; SW-B	C[1]	24.8	SE-C; NE-C; SW-B	C[1]	21.5	SE-B; NE-C; SW-C
21	SR 2/Elkton Rd & Chrysler Ave	In	TWSC				SE-A (0.0); NW-B (11.7)			SE-A (0.0); NW-B (12.1)			SE-A (0.0); NW-B (11.7)			SE-A (0.0); NW-B (12.1)
22	SR 2/Elkton Rd & Short Ln/Thorn Ln	In	Signal	N411T	B	15.0	SE-D; NW-E; NE-A; SW-B	B	13.5	SE-E; NW-E; NE-B; SW-B	A	8.6	SE-D; NW-E; NE-A; SW-A	B	13.5	SE-E; NW-E; NE-B; SW-B
23	SR 2/Elkton Rd & Park Place	In	Signal	N413T	A	4.2	WB-E; NE-A; SW-A	B	10.9	WB-E; NE-A; SW-A	A	4.2	WB-E; NE-A; SW-A	B	18.2	WB-E; NE-A; SW-B
24	SR 2/Elkton Rd & Veterans Ln	In	Signal	N563T	A	2.9	SE-E; NE-A; SW-A	B	10.1	SB-E; NE-A; SW-A	A	3.4	SE-E; NE-A; SW-A	B	10.1	SB-E; NE-A; SW-A
25	SR 2/Elkton Rd & Apple Rd	In	Signal	N414T	C	23.3	SE-E; NW-E; NE-A; SW-B	C	33.4	SE-E; NW-E; NE-B; SW-C	C	21.8	SE-D; NW-E; NE-A; SW-B	C	34.3	SE-E; NW-E; NE-B; SW-C
26	SR 2/Elkton Rd & Amstel Ave	In	Signal	N415T	A[1]	2.5	WB-C; NE-A; SW-A	A[1]	7.4	WB-C; NE-A; SW-A	A[1]	2.5	WB-C; NE-A; SW-A	A[1]	7.1	WB-C; NE-A; SW-A
27	Barksdale Rd & Country Hills Dr	Out	TWSC				NB-A (9.6); SB-B (12.3)			NB-A (9.7); SB-B (14.6)			NB-A (9.6); SB-B (12.3)			NB-A (9.7); SB-B (14.6)
28	Casho Mill Rd & Barksdale Rd	In	Signal	N442T	D	45.4	EB-E; WB-D; NB-C; SB-D	E	56.2	EB-D; **WB-F**; NB-D; SB-C	C	27.9	EB-D; WB-C; NB-B; SB-C	C	30.3	EB-C; WB-D; NB-C; SB-C
29	Apple Rd & Barksdale Rd/Hillside Rd	In	Signal	N663T	B	18.5	EB-C; WB-B; NB-B	C	21.0	EB-C; WB-B; NB-C	B	15.9	EB-C; WB-B; NB-C	C	21.5	EB-C; WB-B; NB-C
30	West Main St & Hillside Rd	In	Signal	N427T	D	43.4	EB-C; WB-D; NB-D; SB-D	D	47.2	EB-D; WB-D; NB-D; SB-D	D	42.4	EB-C; WB-D; NB-D; SB-D	D	46.1	EB-D; WB-D; NB-D; SB-D
31	Casho Mill Rd & Church Rd	In	AWSC		B	10.4	EB-A; WB-A; NB-A; SB-B	C	15.4	EB-A; WB-A; NB-C; SB-A	B	10.4	EB-A; WB-A; NB-A; SB-B	C	15.4	EB-A; WB-A; NB-C; SB-A
32	West Main St & Casho Mill Rd	In	Signal	N426T	D	38.3	EB-D; WB-B; NB-C; SB-C	C	32.7	EB-C; WB-C; NB-D; SB-C	B	18.5	EB-B; WB-A; NB-C; SB-D	C	24.2	EB-C; WB-C; NB-B; SB-B
33	Nottingham Rd & N Church Rd	Out	TWSC				NB-C (16.6)			NB-C (17.7)			NB-C (16.6)			NB-C (17.7)
34	Nottingham Rd & Wedgewood Rd	Out	TWSC				SB-D (27.0); NE-C (17.0)			SB-D (27.4); NE-C (17.8)			SB-D (27.0); NE-C (17.0)			SB-D (27.4); NE-C (17.8)
35	New London Rd & Hillside Rd/W. Cleveland Ave	In	Signal	N439T	C	26.6	SE-NA; NW-B; NE-C; SW-C	C	28.1	SE-NA; NW-C; NE-C; SW-D	C	31.5	SE-NA; NW-B; NE-C; SW-D	C	30.5	SE-NA; NW-B; NE-C; SW-D
36	New London Rd & Country Club Dr/Freemont Rd	Out	Signal	N440T	C	20.2	EB-C; WB-D; NB-B; SB-B	C	22.7	EB-C; WB-D; NB-C; SB-B	B	12.3	EB-D; WB-D; NB-A; SB-A	B	17.6	EB-D; WB-D; NB-B; SB-B
37	New London Rd & Wedgewood Rd	Out	TWSC				EB-C (18.0); WB-C (16.6)			EB-E (42.0); WB-C (19.1)			EB-C (18.0); WB-C (16.6)			EB-E (42.0); WB-C (19.1)
38	New London Rd & Hopkins Bridge Rd	Out	TWSC				WB-C (17.3)			WB-E (37.6)			WB-C (17.3)			WB-E (37.6)
39	Paper Mill Rd & Possum Park Rd/Thompson Sta Rd	Out	Signal	N362	D	43.5	EB-E; WB-D; NE-D; SW-D	D	48.3	EB-E; WB-D; NB-D; SB-D	D	42.4	EB-E; WB-D; NE-D; SW-D	D	48.4	EB-E; WB-E; NB-D; SB-D
40	Paper Mill Rd & Louviers Dr	Out	Signal	N003P	B	12.7	EB-E; WB-E; NE-A; SW-B	C	26.5	EB-E; WB-E; NB-C; SB-B	B	12.7	EB-E; WB-E; NE-A; SW-B	C	27.6	EB-E; WB-E; NB-C; SB-B
41	Paper Mill Rd & Winterthur Ln	Out	Signal	N657	B	10.4	EB-C; WB-C; NB-B; SB-A	B	12.4	EB-C; WB-C; NB-B; SB-B	B	10.6	EB-C; WB-C; NB-B; SB-B	B	12.6	EB-C; WB-C; NB-B; SB-B
42	Paper Mill Rd & Old Paper Mill Rd	Out	Signal	N603T	C	27.1	EB-C; WB-C; NB-C; SB-C	D	39.3	EB-C; WB-C; NB-C; SB-D	B	16.2	EB-C; WB-D; NB-B; SB-B	B	11.8	EB-D; WB-D; NB-A; SB-B
43	North Chapel St & Cleveland Ave	In	Signal	N432T	C[3]	30.1	EB-C; WB-C; NB-D; SB-D	E[3]	56.2	EB-D; WB-E; NB-E; SB-D	C[3]	29.6	EB-C; WB-C; NB-D; SB-D	D[3]	54.1	EB-D; WB-E; NB-D; SB-E
44	Capitol Trail & Possum Park Rd	Out	Signal	N166	D	35.9	EB-C; WB-C; NB-D; SB-D	D	53.7	EB-D; WB-E; NB-E; SB-D	D	35.3	EB-C; WB-C; NB-E; SB-D	D	46.1	EB-D; WB-D; **NB-F**; SB-E
45	Capitol Trail & Anna Way	In	Signal	N511T	A[1]	3.7	EB-A; WB-A; NB-B	A[1]	5.5	EB-A; WB-A; NB-C	A	3.5	EB-A; WB-A; NB-C	A	3.7	EB-A; WB-A; NB-E
46	Capitol Trail & Cleveland Ave/Woodlawn Ave	In	Signal	N422T	**F**	113.5	**EB-F**; WB-E; **NB-F**; SB-E	**F**	187.6	**EB-F**; **WB-F**; NB-E; **SB-F**	**F**	154.7	**EB-F**; WB-E; NB-E; SB-E	**F**	187.2	**EB-F**; **WB-F**; NB-E; SB-E
47	East Main St & Library Ave	In	Signal	N423T	C[1]	31.7	WB-C; NB-C; SB-C	D[1]	45.9	WB-D; NB-C; SB-E	C[1]	24.8	WB-C; NB-B; SB-C	D[1]	38.7	WB-D; NB-C; SB-D
48	SR 273/Newark Christiana Rd & Marrows Rd	In	Signal	N247	C	27.7	EB-A; WB-C; NB-E; SB-A	D	40.7	EB-C; WB-C; **NB-F**; SB-D	D	36.1	EB-D; WB-C; NB-D; SB-A	D	37.8	EB-C; WB-C; NB-E; SB-E
49	Marrows Rd & John Campbell Rd	In	Signal	N653P	A	5.3	EB-D; WB-D; NB-A; SB-A	B	13.0	EB-D; WB-D; NB-A; SB-B	A	5.3	EB-D; WB-D; NB-A; SB-A	B	13.1	EB-D; WB-D; NB-A; SB-B
50	Marrows Rd & Wyoming Rd/Old Forge Rd	In	Signal	N059P	B	10.6	EB-D; WB-D; NB-A; SB-A	B	14.9	EB-D; WB-D; NB-B; SB-A	B	10.6	EB-D; WB-D; NB-A; SB-A	B	13.3	EB-D; WB-D; NB-B; SB-A
51	Marrows Rd & Whitechapel Dr/Kimberton Dr	Out	Signal	N487	B	11.3	EB-C; WB-C; NB-A; SB-A	B	10.0	EB-D; WB-D; NB-A; SB-A	B	11.3	EB-C; WB-C; NB-A; SB-A	B	10.0	EB-D; WB-D; NB-A; SB-A
52	Marrows Rd & Brookside Blvd	Out	Signal	N189	A	7.7	EB-C; WB-C; NB-A; SB-A	A	7.0	EB-C; WB-D; NB-A; SB-A	A	7.7	EB-C; WB-C; NB-A; SB-A	A	7.0	EB-C; WB-D; NB-A; SB-A
53	Marrows Rd & Kensington Ln	Out	TWSC				EB-B (14.7); WB-B (13.2)			EB-D (29.9); **WB-F** (60.1)			EB-B (14.7); WB-B (13.2)			EB-D (29.9); **WB-F** (60.1)
54	SR 4/Chestnut Hill Rd & Marrows Rd	Out	Signal	N255	C	33.9	EB-C; WB-C; NB-D; SB-D	D	52.1	EB-D; WB-E; NB-D; SB-D	C	24.8	EB-B; WB-B; NB-D; SB-D	D	40.6	EB-C; WB-C; NB-E; SB-E
55	SR 72/Library Ave & SR 4/Chestnut Hill Rd	Out	Signal	N346	D	41.7	EB-D; WB-D; NB-D; SB-D	**F**	82.0	EB-E; **WB-F**; NB-D; SB-E	D	41.6	EB-D; WB-D; NB-D; SB-D	E	69.8	EB-E; WB-E; NB-E; SB-E
56	SR 72/Library Ave & Kensington Ln	Out	TWSC				WB-D (27.7)			WB-E (36.0)			WB-D (27.7)			WB-E (36.0)
57	SR 72/Library Ave & Wyoming Rd	In	Signal	N425T	C	25.7	EB-D; WB-D; NB-C; SB-B	D	36.7	**EB-E**; **WB-F**; NB-C; SB-A	C	24.3	EB-D; WB-D; NB-B; SB-B	D	45.5	EB-E; **WB-F**; NB-C; SB-C
58	SR 72/Library Ave & Delaware Ave	In	Signal	N424T	B	16.9	EB-D; WB-NA; NB-B; SB-A	C	28.9	EB-E; WB-NA; NB-C; SB-B	B	10.9	EB-D; WB-NA; NB-A; SB-A	C	32.8	EB-E; WB-NA; NB-D; SB-B
59	East Main St & South Chapel St	In	Signal	N418T	C	23.2	WB-B; NB-B; SB-D	C	24.6	WB-B; NB-B; SB-D	B	19.6	WB-C; NB-A; SB-C	C	28.4	WB-C; NB-C; SB-C
60	Delaware Ave & South Chapel St	In	Signal	N430T	B	18.8	EB-B; NB-D; SB-B	C	22.3	EB-B; NB-D; SB-B	C	25.1	EB-C; NB-C; SB-C	C	28.6	EB-C; NB-C; SB-C
61	Delaware Ave & Tyre Ave	In	Signal	N431T	C	33.6	EB-A; NB-D; **SB-F**	B	15.8	EB-A; NB-D; SB-D	C	23.4	EB-B; NB-C; SB-D	B	15.8	EB-A; NB-D; SB-D
62	South Chapel St & Wyoming Rd - Option 1	In	AWSC		B	14.6	EB-B; WB-B; NB-B; SB-C	E	43.1	EB-B; WB-D; NB-C; **SB-F**	B	14.6	EB-B; WB-B; NB-B; SB-C	E	43.1	EB-B; WB-D; NB-C; **SB-F**
62	South Chapel St & Wyoming Rd - Option 2	In	AWSC													
62	South Chapel St & Wyoming Rd - Option 3	In	Roundabout													
63	East Main St & Academy St	In	Signal	N417T	A[1]	9.9	WB-A; NB-E; SB-NA	C[1]	22.7	WB-A; **NB-F**; SB-D	B[1]	10.3	WB-A; NB-E; SB-NA	B[1]	18.8	WB-A; NB-E; SB-D
64	Delaware Ave & Academy St	In	Signal	N429T	C	32.4	EB-C; NB-C; SB-C	D	35.9	EB-D; NB-D; SB-C	C	29.8	EB-C; NB-D; SB-D	C	34.6	EB-C; NB-D; SB-D
65	Barksdale Rd & Western Connector (proposed)		TWSC													

Int #	Intersection Name	Short-Term Future Scenario (with Improvements, Signal Splits Optimized) AM Int. LOS	AM Delay (sec)	AM Approach LOS	PM Int. LOS	PM Delay (sec)	PM Approach LOS	Long-Term Future (All Improvements w/ HS Connector, Signal Splits Optimized) AM Int. LOS	AM Delay (sec)	AM Approach LOS	PM Int. LOS	PM Delay (sec)	PM Approach LOS
1	SR 896/South College Ave & Welsh Tract Rd	E	59.2	**EB-F**; **WB-F**; NB-D; SB-D	E	63.1	**EB-F**; **WB-F**; NB-C; SB-D	E	59.2	**EB-F**; **WB-F**; NB-D; SB-D	D	44.0	**EB-F**; **WB-F**; NB-C; SB-C
2	SR 896/South College Ave & Chestnut Hill Rd	D[1]	42.9	NB-C; SB-D; NE-E; SW-E	C[1]	26.5	NB-B; SB-B; NE-D; SW-E	D[1]	42.2	NB-C; SB-D; NE-E; SW-E	C[1]	25.8	NB-B; SB-B; NE-D; SW-E
3	SR 896/South College Ave & SR 4/Christina Pkwy	D	47.8	EB-D; WB-D; NB-D; SB-D	E	64.8	**EB-F**; WB-E; NB-D; SB-E	D	47.2	EB-D; WB-D; NB-D; SB-D	E	61.9	EB-E; WB-E; NB-E; SB-E
4	SR 896/South College Ave & Marvin Dr	A[1]	4.7	EB-D; WB-C; NB-A; SB-A	B[1]	16.9	EB-A; WB-E; NB-B; SB-B	A[1]	4.9	EB-D; WB-C; NB-A; SB-A	B[1]	12.4	EB-A; WB-E; NB-A; SB-B
5	SR 896/South College Ave & Discovery Blvd	A	3.0	EB-E; WB-E; NB-A; SB-A	B	10.0	EB-E; **WB-F**; NB-A; SB-A	A	9.7	EB-E; WB-E; NB-A; SB-C	A	8.8	**EB-F**; **WB-F**; NB-A; SB-A
6	SR 896/South College Ave & Healthy Way			EB-B (11.7)			EB-D (25.2)			EB-B (11.4)			EB-C (16.9)
7	SR 896/South College Ave & Inspiration Blvd	B	18.3	**EB-F**; WB-E; NB-B; SB-A	C	32.7	**EB-F**; **WB-F**; NB-A; SB-B	B	13.8	**EB-F**; WB-E; NB-A; SB-A	C	27.8	**EB-F**; **WB-F**; NB-A; SB-B
8	SR 896/South College Ave & W. Park Place	E	60.8	EB-D; WB-D; **NB-F**; SB-D	D	47.0	EB-D; WB-D; NB-E; SB-C	D	38.2	EB-C; WB-C; NB-D; SB-D	D	35.2	EB-D; WB-C; NB-D; SB-C
9	SR 896/South College Ave & Kent Way	A[1]	8.1	NB-A; SB-A	B[1]	11.2	NB-B; SB-B	A[1]	8.6	NB-A; SB-A	B[1]	10.9	NB-A; SB-B
10	SR 896/South College Ave & Amstel Ave	A	0.5	EB-A; NB-A; SB-A	A	1.1	EB-A; NB-A; SB-A	A	0.5	EB-A; NB-A; SB-A	A	1.0	EB-A; NB-A; SB-A
11	SR 896/South College Ave & Delaware Ave	C[1]	24.3	EB-B; NB-D; SB-B	C[1]	32.1	EB-C; NB-E; SB-B	C[1]	22.8	EB-B; NB-D; SB-A	C[1]	28.7	EB-C; NB-D; SB-A
12	East Main St & SR 896/South College Ave	B[1,2]	17.9	WB-B; NB-C	C[1,2]	26.4	WB-C; NB-C	B[1,2]	17.7	WB-B; NB-C	B[1,2]	19.7	WB-B; NB-C
13	East Main St & North College Ave	B[1]	13.2	WB-A; SB-D	B[1]	11.7	WB-A; SB-E	B[1]	13.1	WB-A; SB-D	B[1]	11.5	WB-A; SB-E
14	North College Ave & Cleveland Ave	B[1]	15.0	EB-B; WB-A; NB-E; SB-E	C[1]	24.9	EB-C; WB-A; NB-E; SB-D	B[1]	14.8	EB-B; WB-A; NB-E; SB-E	C[1]	21.9	EB-B; WB-A; NB-E; SB-E
15	North College Ave & Ray St	A	7.4	WB-A; NB-A; SB-A	A	7.6	WB-A; NB-A; SB-A	A	7.4	WB-A; NB-A; SB-A	A	7.6	WB-A; NB-A; SB-A
16	SR 4/Christina Pkwy & Science Blvd	A	8.4	EB-A; WB-A; SB-D	B	16.2	EB-A; WB-B; SB-D	A	8.4	EB-A; WB-A; SB-D	B	16.3	EB-A; WB-B; SB-D
17	SR 2/Elkton Rd & Otts Chapel Rd	B	17.2	SE-E; NW-D; NE-B; SW-A	C	34.6	SE-E; NW-D; NE-C; SW-C	B	18.0	SE-E; NW-D; NE-B; SW-B	C	34.6	SE-E; NW-D; NE-C; SW-C
18	SR 2/Elkton Rd & Interchange Blvd	A	2.2	SE-E; NW-E; NE-A; SW-A	B	17.5	SE-E; NW-E; NE-B; SW-B	A	6.7	SE-E; NW-E; NE-A; SW-B	B	17.5	SE-E; NW-E; NE-B; SW-B
19	SR 2/Elkton Rd & SR 4/Christina Pkwy	E	56.7	**SE-F**; NW-E; NE-B; SW-E	D	50.3	**SE-F**; NW-E; NE-B; SW-C	D[4]	50.6	**SE-F**; NW-E; NE-B; SW-D	D[4]	51.8	**SE-F**; NW-D; NE-D; SW-D
20	SR 2/Elkton Rd & Casho Mill Rd	D[1]	35.9	SE-C; NE-C; SW-D	C[1]	24.7	SE-B; NE-C; SW-C	B[1,4]	17.4	SE-C; NE-B; SW-B	B[1,4]	17.0	SE-C; NE-B; SW-B
21	SR 2/Elkton Rd & Chrysler Ave			SE-A (0.0); NW-B (12.5)			SE-A (0.0); NW-B (12.8)			SE-A (0.0); NW-B (12.5)			SE-A (0.0); NW-B (12.7)
22	SR 2/Elkton Rd & Short Ln/Thorn Ln	B	14.6	SE-D; NW-E; NE-A; SW-B	B	14.4	SE-E; NW-E; NE-B; SW-B	A	9.8	SE-D; NW-E; NE-A; SW-A	B	15.1	SE-E; NW-E; NE-B; SW-B
23	SR 2/Elkton Rd & Park Place	A	4.0	WB-E; NE-A; SW-A	B	18.4	WB-E; NE-A; SW-B	B	14.9	WB-E; NE-B; SW-A	B	10.7	WB-E; NE-A; SW-A
24	SR 2/Elkton Rd & Veterans Ln	A	3.4	SE-E; NE-A; SW-A	A	6.8	SE-E; NE-A; SW-A	A	2.9	SE-E; NE-A; SW-A	B	13.3	SE-E; NE-B; SW-A
25	SR 2/Elkton Rd & Apple Rd	C	22.9	SE-D; NW-E; NE-A; SW-B	D	37.0	SE-E; NW-E; NE-B; SW-C	C	22.9	SE-D; NW-E; NE-A; SW-B	D	37.0	SE-E; NW-E; NE-B; SW-C
26	SR 2/Elkton Rd & Amstel Ave	A[1]	2.5	WB-C; NE-A; SW-A	A[1]	7.0	WB-D; NE-A; SW-A	A[1]	2.5	WB-C; NE-A; SW-A	A[1]	7.0	WB-D; NE-A; SW-A
27	Barksdale Rd & Country Hills Dr			NB-A (9.8); SB-B (13.0)			NB-A (9.9); SB-C (15.4)			NB-A (9.8); SB-B (13.0)			NB-A (9.9); SB-C (15.4)
28	Casho Mill Rd & Barksdale Rd	C	31.8	EB-D; WB-C; NB-B; SB-C	C	32.4	EB-D; WB-D; NB-C; SB-C	C[4]	34.4	EB-D; WB-D; NB-B; SB-C	C[4]	34.2	EB-C; WB-D; NB-D; SB-D
29	Apple Rd & Barksdale Rd/Hillside Rd	B	15.3	EB-C; WB-B; NB-C	C	21.8	EB-C; WB-B; NB-C	B	15.3	EB-C; WB-B; NB-C	C	21.8	EB-C; WB-B; NB-C
30	West Main St & Hillside Rd	D	44.4	EB-C; WB-D; NB-E; SB-D	D	47.9	EB-D; WB-D; NB-D; SB-D	D	44.4	EB-C; WB-D; NB-D; SB-D	D	47.5	EB-D; WB-D; NB-D; SB-D
31	Casho Mill Rd & Church Rd	B	13.3	EB-A; WB-A; NB-A; SB-C	D	29.7	EB-A; WB-A; NB-E; SB-B	B	13.3	EB-A; WB-A; NB-A; SB-C	C	20.8	EB-A; WB-A; NB-D; SB-B
32	West Main St & Casho Mill Rd	C	20.8	EB-B; WB-A; NB-C; SB-C	C	26.5	EB-D; WB-C; NB-B; SB-B	C	20.4	EB-B; WB-A; NB-C; SB-D	C	26.5	EB-D; WB-C; NB-B; SB-B
33	Nottingham Rd & N Church Rd			NB-C (19.0)			NB-C (19.7)			NB-C (19.0)			NB-C (19.7)
34	Nottingham Rd & Wedgewood Rd			SB-E (42.0); NE-C (19.3)			SB-E (35.0); NE-C (20.0)			SB-E (42.0); NE-C (19.3)			SB-E (35.0); NE-C (19.9)
35	New London Rd & Hillside Rd/W. Cleveland Ave	C	32.9	SE-NA; NW-B; NE-D; SW-D	C	33.4	SE-NA; NW-B; NE-C; SW-D	D	35.7	SE-NA; NW-B; NE-D; SW-D	C	33.5	SE-NA; NW-B; NE-C; SW-D
36	New London Rd & Country Club Dr/Freemont Rd	B	11.9	EB-D; WB-D; NB-A; SB-A	B	17.3	EB-D; WB-D; NB-B; SB-B	B	11.9	EB-D; WB-D; NB-A; SB-A	B	17.3	EB-D; WB-D; NB-B; SB-B
37	New London Rd & Wedgewood Rd			EB-C (22.0); WB-C (19.3)			**EB-F** (63.2); WB-C (21.9)			EB-C (22.0); WB-C (19.3)			**EB-F** (63.2); WB-C (21.9)
38	New London Rd & Hopkins Bridge Rd			WB-C (20.6)			**WB-F** (58.9)			WB-C (20.3)			**WB-F** (58.9)
39	Paper Mill Rd & Possum Park Rd/Thompson Sta Rd	D	54.5	EB-E; WB-E; NE-D; SW-D	E	56.3	EB-E; **WB-F**; NE-D; SW-D	D	54.5	EB-E; WB-E; NE-D; SW-D	E	56.3	EB-E; **WB-F**; NE-D; SW-D
40	Paper Mill Rd & Louviers Dr	C	31.7	EB-E; WB-E; NE-C; SW-C	C	31.8	EB-E; WB-E; NE-C; SW-C	C	31.8	EB-E; WB-E; NE-C; SW-C	C	31.4	EB-E; WB-E; NE-C; SW-C
41	Paper Mill Rd & Winterthur Ln	B	14.4	EB-C; WB-C; NB-B; SB-B	B	15.5	EB-C; WB-C; NB-B; SB-B	B	14.2	EB-C; WB-C; NB-B; SB-B	B	15.5	EB-C; WB-C; NB-B; SB-B
42	Paper Mill Rd & Old Paper Mill Rd	B	15.6	EB-C; WB-D; NB-B; SB-B	B	12.8	EB-D; WB-D; NB-A; SB-B	B	15.4	EB-C; WB-D; NB-B; SB-B	B	12.8	EB-D; WB-D; NB-A; SB-B
43	North Chapel St & Cleveland Ave	D[3]	36.9	EB-C; WB-C; NB-D; SB-D	E[3]	75.5	EB-E; **WB-F**; NB-E; SB-E	D[3]	37.7	EB-C; WB-C; NB-E; SB-D	E[3]	72.4	EB-E; WB-E; NB-E; SB-E
44	Capitol Trail & Possum Park Rd	D	37.9	EB-C; WB-D; NB-E; SB-E	D	51.8	EB-D; WB-D; **NB-F**; SB-E	D	37.9	EB-C; WB-D; NB-E; SB-E	D	51.8	EB-D; WB-D; **NB-F**; SB-E
45	Capitol Trail & Anna Way	A	3.8	EB-A; WB-A; NB-C	A	4.0	EB-A; WB-A; NB-E	A	3.8	EB-A; WB-A; NB-C	A	4.0	EB-A; WB-A; NB-E
46	Capitol Trail & Cleveland Ave/Woodlawn Ave	**F**	198.8	**EB-F**; WB-E; **NB-F**; **SB-F**	**F**	203.9	**EB-F**; **WB-F**; **NB-F**; **SB-F**	**F**	205.5	**EB-F**; WB-E; NB-E; **SB-F**	**F**	229.4	**EB-F**; **WB-F**; NB-E; **SB-F**
47	East Main St & Library Ave	C[1]	27.7	WB-C; NB-C; SB-C	D[1]	37.1	WB-D; NB-C; SB-D	C[1]	26.3	WB-C; NB-C; SB-C	D[1]	37.8	WB-D; NB-C; SB-D
48	SR 273/Newark Christiana Rd & Marrows Rd	C	34.6	EB-C; WB-C; NB-E; SB-A	D	42.6	EB-C; WB-C; **NB-F**; SB-E	C	34.3	EB-C; WB-C; NB-E; SB-A	D	42.8	EB-C; WB-C; **NB-F**; SB-E
49	Marrows Rd & John Campbell Rd	A	5.3	EB-D; WB-D; NB-A; SB-A	B	13.0	EB-D; WB-D; NB-A; SB-B	A	5.3	EB-D; WB-D; NB-A; SB-A	C	21.6	EB-D; WB-D; NB-C; SB-B
50	Marrows Rd & Wyoming Rd/Old Forge Rd	B	12.5	EB-D; WB-D; NB-A; SB-A	C	20.8	EB-D; WB-D; NB-B; SB-B	B	11.9	EB-D; WB-D; NB-A; SB-A	B	16.1	EB-D; WB-D; NB-B; SB-A
51	Marrows Rd & Whitechapel Dr/Kimberton Dr	B	11.7	EB-C; WB-C; NB-A; SB-A	B	10.1	EB-D; WB-D; NB-A; SB-A	B	11.6	EB-C; WB-C; NB-A; SB-A	B	10.1	EB-D; WB-D; NB-A; SB-A
52	Marrows Rd & Brookside Blvd	A	7.9	EB-C; WB-C; NB-A; SB-A	A	7.1	EB-C; WB-D; NB-A; SB-A	A	7.8	EB-C; WB-C; NB-A; SB-A	A	7.1	EB-C; WB-D; NB-A; SB-A
53	Marrows Rd & Kensington Ln			EB-B (14.9); WB-B (13.4)			EB-D (30.6); **WB-F** (71.4)			EB-B (14.9); WB-B (13.4)			EB-D (30.6); **WB-F** (71.4)
54	SR 4/Chestnut Hill Rd & Marrows Rd	C	25.0	EB-B; WB-B; NB-D; SB-D	D	44.5	EB-C; WB-C; NB-E; **SB-F**	C	25.0	EB-B; WB-B; NB-D; SB-D	D	44.6	EB-C; WB-C; NB-E; **SB-F**
55	SR 72/Library Ave & SR 4/Chestnut Hill Rd	D	46.5	EB-D; WB-D; NB-D; SB-D	**F**	90.2	**EB-F**; **WB-F**; **NB-F**; **SB-F**	D	44.2	EB-D; WB-D; NB-D; SB-D	**F**	95.7	**EB-F**; **WB-F**; **NB-F**; **SB-F**
56	SR 72/Library Ave & Kensington Ln			WB-E (47.8)			WB-E (47.6)			WB-E (49.8)			**WB-F** (63.8)
57	SR 72/Library Ave & Wyoming Rd	C	27.5	EB-E; WB-D; NB-C; SB-B	E	64.4	**EB-F**; **WB-F**; NB-D; SB-E	B	12.0	EB-E; WB-D; NB-A; SB-A	D	41.6	**EB-F**; **WB-F**; NB-C; SB-B
58	SR 72/Library Ave & Delaware Ave	A	8.2	EB-D; WB-NA; NB-A; SB-A	C	34.4	EB-E; WB-NA; NB-D; SB-B	A	8.0	EB-D; WB-NA; NB-A; SB-A	B	18.5	EB-E; WB-NA; NB-A; SB-B
59	East Main St & South Chapel St	C	23.6	WB-C; NB-A; SB-C	C	27.1	WB-C; NB-C; SB-C	C	22.2	WB-C; NB-A; SB-C	C	21.9	WB-C; NB-A; SB-C
60	Delaware Ave & South Chapel St	B	19.7	EB-C; NB-C; SB-A	C	22.9	EB-C; NB-C; SB-A	B	19.6	EB-C; NB-C; SB-A	C	29.0	EB-C; NB-C; SB-C
61	Delaware Ave & Tyre Ave	C	26.0	EB-B; NB-C; SB-D	B	15.8	EB-A; NB-D; SB-D	C	25.8	EB-B; NB-C; SB-D	B	15.8	EB-A; NB-D; SB-D
62	South Chapel St & Wyoming Rd - Option 1	C	21.5	EB-B; WB-D; NB-B; SB-C	**F**	56.8	EB-C; WB-E; NB-D; **SB-F**	C	21.3	EB-B; WB-C; NB-B; SB-D	**F**	57.8	EB-B; WB-E; NB-C; **SB-F**
62	South Chapel St & Wyoming Rd - Option 2							C	16.2	EB-B; WB-C; NB-B; SB-B	D	31.1	EB-B; WB-E; NB-C; SB-C
62	South Chapel St & Wyoming Rd - Option 3							A	8.2	EB-A; WB-A; NB-A; SB-A	B	13.0	EB-A; WB-B; NB-B; SB-B
63	East Main St & Academy St	A[1]	8.4	WB-A; NB-E; SB-NA	C[1]	21.6	WB-B; NB-E; SB-D	A[1]	7.4	WB-A; NB-D; SB-NA	B[1]	17.5	WB-A; NB-D; SB-D
64	Delaware Ave & Academy St	C	31.0	EB-C; NB-C; SB-C	D	35.1	EB-C; NB-D; SB-D	C	29.8	EB-C; NB-D; SB-C	C	34.8	EB-C; NB-D; SB-D
65	Barksdale Rd & Western Connector (proposed)									NB-B[4] (14.3)			NB-C[4] (15.7)

In:	36	Signal: 52
Out:	28	Unsig: 12
Total:	64	64

Delaware Ave & Haines St
E. Main St & Haines St

Existing Conditions (Signal Splits Not Optimized) notes:

Overall intersection and approach LOS values of E or worse and excessive delay values are shown in RED.

1 - Synchro native methodology used due to restrictions in HCM6 and HCM2010 methodologies for U-turns, exclusive pedestrian phases, unconventional phasing or clustered signal configurations.

2 - Peak Hour Factor and Heavy Vehicle % defaults used due to no specific data available.

3 - Fifth intersection approach (no volumes) removed to match signal timing plan; HCM6 used.

Existing Conditions (Signal Splits Optimized) notes:

Overall intersection and approach LOS values of F and excessive delay values are shown in RED.

1 - Synchro native methodology used due to restrictions in HCM6 and HCM2010 methodologies for U-turns, exclusive pedestrian phases, unconventional phasing or clustered signal configurations.

2 - Peak Hour Factor and Heavy Vehicle % defaults used due to no specific data available.

3 - Fifth intersection approach (no volumes) removed to match signal timing plan; HCM6 used.

Short-Term Future Scenario notes:

Overall intersection and approach LOS values of F and excessive delay values are shown in RED.

1 - Synchro native methodology used due to restrictions in HCM6 and HCM2010 methodologies for U-turns, exclusive pedestrian phases, unconventional phasing or clustered signal configurations.

2 - Peak Hour Factor and Heavy Vehicle % defaults used due to no specific data available.

3 - Fifth intersection approach (no volumes) removed to match signal timing plan; HCM6 used.

Long-Term Future notes:

Overall intersection and approach LOS values of F and excessive delay values are shown in RED.

1 - Synchro native methodology used due to restrictions in HCM6 and HCM2010 methodologies for U-turns, exclusive pedestrian phases, unconventional phasing or clustered signal configurations.

2 - Peak Hour Factor and Heavy Vehicle % defaults used due to no specific data available.

3 - Fifth intersection approach (no volumes) removed to match signal timing plan; HCM6 used.

4 - LOS based on volumes calculated after shift due to new connector.

Arterial 1 - SR 72/Library Ave/SR 2 Capitol Trail from SR 4 to Possum Park Rd

Arterial 1 NB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	111.8	6.49		26.3	C
ST Imp Future	149.3	7.11		24.0	C
EC-to-STI Future Change	37.5	0.62	9.64%	-2.3	No Change
LT Imp Future	132.8	6.84		25.0	C
EC-to-LTI Future Change	21.0	0.35	5.47%	-1.3	No Change
STI-to-LTI Future Change	-16.5	-0.27	-3.80%	1.0	No Change

Arterial 1 SB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	168.2	7.43		23.0	C
ST Imp Future	209.6	8.12		21.0	D
EC-to-STI Future Change	41.4	0.69	9.29%	-2.0	-1
LT Imp Future	212.2	8.16		20.9	D
EC-to-LTI Future Change	44.0	0.73	9.90%	-2.1	-1
STI-to-LTI Future Change	2.6	0.04	0.55%	-0.1	No Change

Arterial 1 NB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	174.5	7.53		22.6	C
ST Imp Future	197.8	7.92		21.5	D
EC-to-STI Future Change	35.1	0.39	5.18%	-1.1	-1
LT Imp Future	178.3	7.62		22.4	C
EC-to-LTI Future Change	3.8	0.09	1.20%	-0.2	No Change
STI-to-LTI Future Change	-19.5	-0.30	-3.79%	0.9	+1

Arterial 1 SB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	241.9	8.65		19.7	D
ST Imp Future	322.9	10.00		17.0	D
EC-to-STI Future Change	81	1.35	15.56%	-2.7	No Change
LT Imp Future	318.1	9.95		17.1	D
EC-to-LTI Future Change	76.2	1.30	14.98%	-2.6	No Change
STI-to-LTI Future Change	-4.8	-0.05	-0.50%	0.1	No Change

Arterial 2 - SR 896 from Welsh Tract Rd to Cleveland Ave

Arterial 2 NB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	239.2	9.82		13.8	C
ST Imp Future	326.3	11.28		12.0	D
EC-to-STI Future Change	87.1	1.46	14.83%	-1.8	-1
LT Imp Future	287.3	10.63		12.8	D
EC-to-LTI Future Change	48.1	0.81	8.21%	-1.0	-1
STI-to-LTI Future Change	-39.0	-0.65	-5.76%	0.8	No Change

Arterial 2 SB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	213.5	10.31		14.4	C
ST Imp Future	254.4	10.99		13.5	C
EC-to-STI Future Change	40.9	0.68	6.61%	-0.9	No Change
LT Imp Future	260.5	11.09		13.4	C
EC-to-LTI Future Change	47	0.78	7.57%	-1	No Change
STI-to-LTI Future Change	6.1	0.10	0.89%	-0.1	No Change

Arterial 2 NB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	305.0	10.92		12.4	D
ST Imp Future	354.7	11.75		11.5	D
EC-to-STI Future Change	49.7	0.83	7.60%	-0.9	No Change
LT Imp Future	333.7	11.40		11.9	D
EC-to-LTI Future Change	28.7	0.48	4.40%	-0.5	No Change
STI-to-LTI Future Change	-21.0	-0.35	-2.98%	0.4	No Change

Arterial 2 SB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	238.0	10.72		13.8	C
ST Imp Future	279.8	11.42		13.0	D
EC-to-STI Future Change	41.8	0.70	6.52%	-0.8	-1
LT Imp Future	301.3	11.77		12.6	D
EC-to-LTI Future Change	63.3	1.05	9.83%	-1.2	-1
STI-to-LTI Future Change	21.5	0.36	3.11%	-0.4	No Change

Arterial 3 - SR 4 from Elkton Rd to Marrows Rd

Arterial 3 EB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	107.0	5.20		31.3	C
ST Imp Future	109.7	5.24		31.1	C
EC-to-STI Future Change	2.7	0.05	0.87%	-0.2	No Change
LT Imp Future	91.0	4.93		33.0	C
EC-to-LTI Future Change	-16.0	-0.27	-5.10%	1.7	No Change
STI-to-LTI Future Change	-18.7	-0.31	-5.92%	1.9	No Change

Arterial 3 WB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	117.1	5.36		30.3	C
ST Imp Future	137.1	5.70		28.6	C
EC-to-STI Future Change	20.0	0.33	6.22%	-1.7	No Change
LT Imp Future	151.9	5.94		27.4	C
EC-to-LTI Future Change	34.8	0.58	10.75%	-2.9	No Change
STI-to-LTI Future Change	14.8	0.24	4.27%	-1.2	No Change

Arterial 3 EB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	142.0	5.78		28.2	C
ST Imp Future	140.9	5.76		28.3	C
EC-to-STI Future Change	-1.1	-0.02	-0.35%	0.1	No Change
LT Imp Future	136.2	5.68		28.6	C
EC-to-LTI Future Change	-5.8	-0.10	-1.70%	0.4	No Change
STI-to-LTI Future Change	-4.7	-0.08	-1.36%	0.3	No Change

Arterial 3 WB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	138.8	5.73		28.4	C
ST Imp Future	208.6	6.89		23.6	D
EC-to-STI Future Change	69.8	1.16	20.29%	-4.8	-1
LT Imp Future	215.0	6.99		23.3	D
EC-to-LTI Future Change	76.2	1.27	22.10%	-5.1	-1
STI-to-LTI Future Change	6.4	0.10	1.50%	-0.3	No Change

Arterial 4 - SR 273/Main St/Nottingham Rd from Marrows Rd to Casho Mill Rd

Arterial 4 EB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	189.9	10.10		16.3	C
ST Imp Future	220.6	10.61		15.5	C
EC-to-STI Future Change	30.7	0.51	5.05%	-0.8	No Change
LT Imp Future	200.2	10.27		16.1	C
EC-to-LTI Future Change	10.3	0.17	1.68%	-0.2	No Change
STI-to-LTI Future Change	-20.4	-0.34	-3.20%	0.6	No Change

Arterial 4 WB AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	142.7	7.91		17.3	C
ST Imp Future	151.4	8.19		16.7	C
EC-to-STI Future Change	8.7	0.28	3.56%	-0.6	No Change
LT Imp Future	158.1	8.30		16.5	C
EC-to-LTI Future Change	15.4	0.39	4.93%	-0.8	No Change
STI-to-LTI Future Change	6.7	0.11	1.32%	-0.2	No Change

Arterial 4 EB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	234.8	10.85		15.1	C
ST Imp Future	260.1	11.27		14.6	C
EC-to-STI Future Change	25.3	0.42	3.87%	-0.5	No Change
LT Imp Future	250.0	11.10		14.9	C
EC-to-LTI Future Change	15.2	0.25	2.30%	-0.2	No Change
STI-to-LTI Future Change	-10.1	-0.17	-1.51%	0.3	No Change

Arterial 4 WB PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC	180.7	8.40		16.3	C
ST Imp Future	187.3	8.79		15.6	C
EC-to-STI Future Change	6.6	0.39	4.64%	-0.7	No Change
LT Imp Future	192.2	8.87		15.4	C
EC-to-LTI Future Change	11.5	0.47	5.60%	-0.9	No Change
STI-to-LTI Future Change	4.9	0.08	0.91%	-0.2	No Change

Arterial 5 - Elkton Rd from Otts Chapel Rd to Amstel Ave

Arterial 5 NE AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC North Section	24.1	2.37		24.6	B
EC South Section	50.8	2.44		25.4	C
EC Combined	74.9	4.81			
STI Future North Section	20.1	2.30		25.3	B
EC-to-STI Future Change North Section	-4.0	-0.07	-2.95%	0.7	No Change
STI Future South Section	60.4	2.60		23.8	C
EC-to-STI Future Change South Section	36.3	0.23	9.70%	-0.8	No Change
STI Future Combined	80.5	4.90			
LTI Future North Section	22.8	2.35		24.8	B
EC-to-LTI Future Change North Section	-1.3	-0.02	-0.84%	0.2	No Change
STI-to-LTI Future Change North Section	2.7	0.05	2.17%	-0.5	No Change
LTI Future South Section	28.7	2.08		29.9	B
EC-to-LTI Future Change South Section	-22.1	-0.36	-14.75%	4.5	+1
STI-to-LTI Future Change South Section	-31.7	-0.52	-20.00%	6.1	+1
LTI Future Combined	51.5	4.43			

Arterial 5 SW AM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC North Section	73.2	3.23		18.0	C
EC South Section	31.6	2.12		29.2	B
EC Combined	104.8	5.35			
STI Future North Section	94.1	3.57		16.3	D
EC-to-STI Future Change North Section	20.9	0.34	10.53%	-1.7	-1
STI Future South Section	35.0	2.18		28.4	B
EC-to-STI Future Change South Section	3.4	0.06	1.86%	-0.8	No Change
STI Future Combined	129.1	5.75			
LTI Future North Section	54.5	2.91		19.9	C
EC-to-LTI Future Change North Section	-18.7	-0.32	-9.91%	1.9	No Change
STI-to-LTI Future Change North Section	-39.6	-0.66	-18.49%	3.6	+1
LTI Future South Section	25.8	2.03		30.6	B
EC-to-LTI Future Change South Section	-5.8	-0.09	-4.25%	1.4	No Change
STI-to-LTI Future Change South Section	-9.2	-0.15	-6.88%	2.2	No Change
LTI Future Combined	80.3	4.94			

Arterial 5 NE PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC North Section	55.1	2.89		20.2	C
EC South Section	81.0	2.95		21.0	D
EC Combined	136.1	5.84			
STI Future North Section	56.4	2.91		20.0	C
EC-to-STI Future Change North Section	1.3	0.02	0.69%	-0.2	No Change
STI Future South Section	62.9	2.65		23.4	C
EC-to-STI Future Change South Section	-18.1	-0.30	-10.17%	2.4	+1
STI Future Combined	119.3	5.56			
LTI Future North Section	43.7	2.70		21.6	C
EC-to-LTI Future Change North Section	-11.4	-0.19	-6.57%	1.4	No Change
STI-to-LTI Future Change North Section	-12.7	-0.21	-7.22%	1.6	No Change
LTI Future South Section	61.3	2.62		23.7	C
EC-to-LTI Future Change South Section	-19.7	-0.33	-11.19%	2.7	+1
STI-to-LTI Future Change South Section	-1.6	-0.03	-1.13%	0.3	No Change
LTI Future Combined	80.9	4.92			

Arterial 5 SW PM	Signal Delay (sec)	Travel Time (min)	Travel Time Change %	Arterial Speed (mph)	Arterial LOS
EC North Section	78.4	3.32		17.6	D
EC South Section	81.2	2.95		21.0	D
EC Combined	159.6	6.27			
STI Future North Section	82.1	3.38		17.2	D
EC-to-STI Future Change North Section	3.7	0.06	1.81%	-0.4	No Change
STI Future South Section	76.4	2.87		21.6	D
EC-to-STI Future Change South Section	-4.8	-0.08	-2.71%	0.6	No Change
STI Future Combined	158.5	6.25			
LTI Future North Section	80.3	3.35		17.4	D
EC-to-LTI Future Change North Section	1.9	0.03	0.90%	-0.2	No Change
STI-to-LTI Future Change North Section	-1.8	-0.03	-0.89%	0.2	No Change
LTI Future South Section	71.4	2.79		22.2	C
EC-to-LTI Future Change South Section	-9.8	-0.16	-5.42%	1.2	+1
STI-to-LTI Future Change South Section	-5.0	-0.08	-2.79%	0.6	+1
LTI Future Combined	151.8	6.14			

Exhibit B to accompany Newark TID Agreement

Service Standards

Draft Service Standards for Newark TID

These standards describe the standards to which DelDOT will work in developing transportation improvement projects that are to be built as part of the Newark TID. They in no way obligate DelDOT or the City to make specific improvements. They describe the form and function that improvements are to have if improvements are to be made.

I. Inside Participant Boundary

A. Travel Time and Intersection Delay Standards

1. To account for local, including school year, variations in traffic, DelDOT shall adjust weekday traffic counts to approximate annual average volumes.

2. DelDOT may further adjust specific volumes to account for errors in the counted volumes where such errors become apparent and for instances where it is apparent that traffic has increased since the counts were done. Traffic counts obtained within the last three calendar years shall be used for all TID traffic analyses.

3. The same standards for all roads in the study area shall be assumed.

4. Use of the procedures in the most recent edition of the Highway Capacity Manual and applicability only to the Automobile Mode are assumed except as specified in this document.

   Control delay is the delay associated with vehicles slowing in advance of an intersection, the time spent stopped on an intersection approach, the time spent as vehicles move up in the queue, and the time needed for vehicles to accelerate to their desired speed.

   Arterial Level of Service Analysis using Synchro Traffic Impact Analysis or best practices shall be the basis of Travel Time standards. Intersection Level of Service Analysis using Synchro Traffic Impact Analysis or best practices shall be the basis of intersection delay standards.

5. The Travel Time Service Standard is that a maximum increase of ~~5%~~80 seconds in the total travel time per segment is acceptable. The segments are as specified in section A.8. below.

6. Maximum intersection delay standards are as follows:

a. Overall average intersection control delay for Weekday (Monday through Friday) Morning and Evening Peak Hours at signalized intersections: Maximum of 80 seconds. Delay for specific approaches and movements may be higher.

b. Overall average intersection control delay for Weekday (Monday through Friday) Morning and Evening Peak Hours at roundabout and all-way stop-controlled intersections: Maximum of 50 seconds. Delay for specific approaches and movements may be higher.

c. Intersection control delay for Weekday (Monday through Friday) Morning and Evening Peak Hours at two-way stop-controlled intersections: Maximum of 50 seconds for left turns from the major street. Delay for minor street approaches and movements may be higher.

7. In the following specific locations, DelDOT and the City agree that improvements outside the existing right-of-way will not be required, regardless of delay and queue lengths:

   a. None at present

8. Facilities to be analyzed for the Travel Time standard shall include the following road segments:

   a. SR 72/Library Ave/SR 2 Capitol Trail from SR 4 to Possum Park Rd;
   b. SR 896 from Welsh Tract Rd to Cleveland Ave;
   c. SR 4 from Elkton Rd to Marrows Rd;
   d. SR 273/Main St/Nottingham Rd from Marrows Rd to Casho Mill Rd;
   e. Elkton Rd from Otts Chapel Rd to Amstel Ave.

9. Facilities to be analyzed for the intersection delay standard shall include all at-grade intersections of one or more State-maintained roads with:
   a. Other State-maintained roads;
   b. Rail lines
   c. City-maintained streets, excluding alleys;
   d. Commercial or institutional driveways served by traffic signals.

10. The intersection delay standard shall be used to identify needed improvements first. Then the travel time standard shall be evaluated and additional improvements identified if needed to meet it.

11. For intersection delay only, intersections that exceed the delay standard under existing conditions, with or without signal optimization, shall ~~have improvements done first, not funded through the TID, to reduce delay to the standard.~~ be exempt from the intersection delay standard. Efforts to minimize increases in delay at these locations shall be agreed upon by the City of Newark and DelDOT.

B. Geometric Standards

1. Use of posted speed limits is assumed.

2. The DelDOT Functional Classification Map, applicable DelDOT design standards, and DelDOT's Complete Streets Policy are assumed, for the identification and design of improvements on State-maintained roads.

3. With specific regard to typical sections on State-maintained roads, the following minimum widths are required:

   a. 10-foot through lanes;
   b. 10-foot turning lanes (12-foot for two-way left turn lanes, 15-foot for a right turn lane if a 5-foot bicycle lane is included);
   c. 5-foot shoulders on local roads;
   d. 8-foot shoulders on collector and minor arterial roads; and
   e. 10-foot shoulders on principal arterial roads.

4. City of Newark regulations, requirements, and standards shall be used for all City maintained roadways.

C. Access and intersection control

1. DelDOT's Development Coordination Manual shall apply to access on State-maintained roads. Subdivision streets within the City limits will be built to City standards and for private or municipal maintenance.

2. On State-maintained roads roundabouts shall be considered first as a means of intersection control in accordance with DelDOT Design Guidance Memorandum Number 1-26, incorporated here by reference. This consideration shall be part of a larger intersection control evaluation. In the assessment of the proper intersection control several factors are to be considered, including but not limited to, safety, capacity, and right-of-way need and property impacts.

3. Proposed changes to intersection control shall be based on evaluation of crash data and designed in accordance with the Delaware Manual on Uniform Traffic Control Devices and other criteria as may be adopted by DelDOT for that purpose.

D. Fixed Route Transit

Existing DART First State, UNICITY, and University of Delaware bus service is assumed to continue. Addition of new stops and the amenities required at each stop shall be at the discretion of the respective transit providers.

The recommendations in the 2019 Newark-Area Transit Study shall be considered in the identification of TID improvements. Capital transit improvements are eligible for TID participation.

E. Aesthetic Standards

Plain bituminous pavement with Portland cement concrete curbs and sidewalks, galvanized steel signal poles and streetlight heads, grass or concrete medians and grass or bituminous-paved shoulders are assumed.

The same fancy street signs used in the DelDOT 2020 Main Street project shall be used along _____ roads. ____

F. Drainage

Where new road construction is proposed to address otherwise substandard conditions, adequate drainage shall be provided as part of that construction. DelDOT drainage standards shall apply to State-Maintained roads and City of Newark standards shall apply to City roads.

G. Pedestrian and Bicycle Facilities

1. The City's Bike Plan shall be referenced when making design decisions related to bike facilities.

2. Existing and proposed pedestrian crossing treatments (at intersections and/or mid-block) should be evaluated and designed using national and local research. Preferred design is to incorporate a median refuge island to create a two-stage crossing.

II. Outside Participant Boundary but within Facilities Boundary – Same as inside.

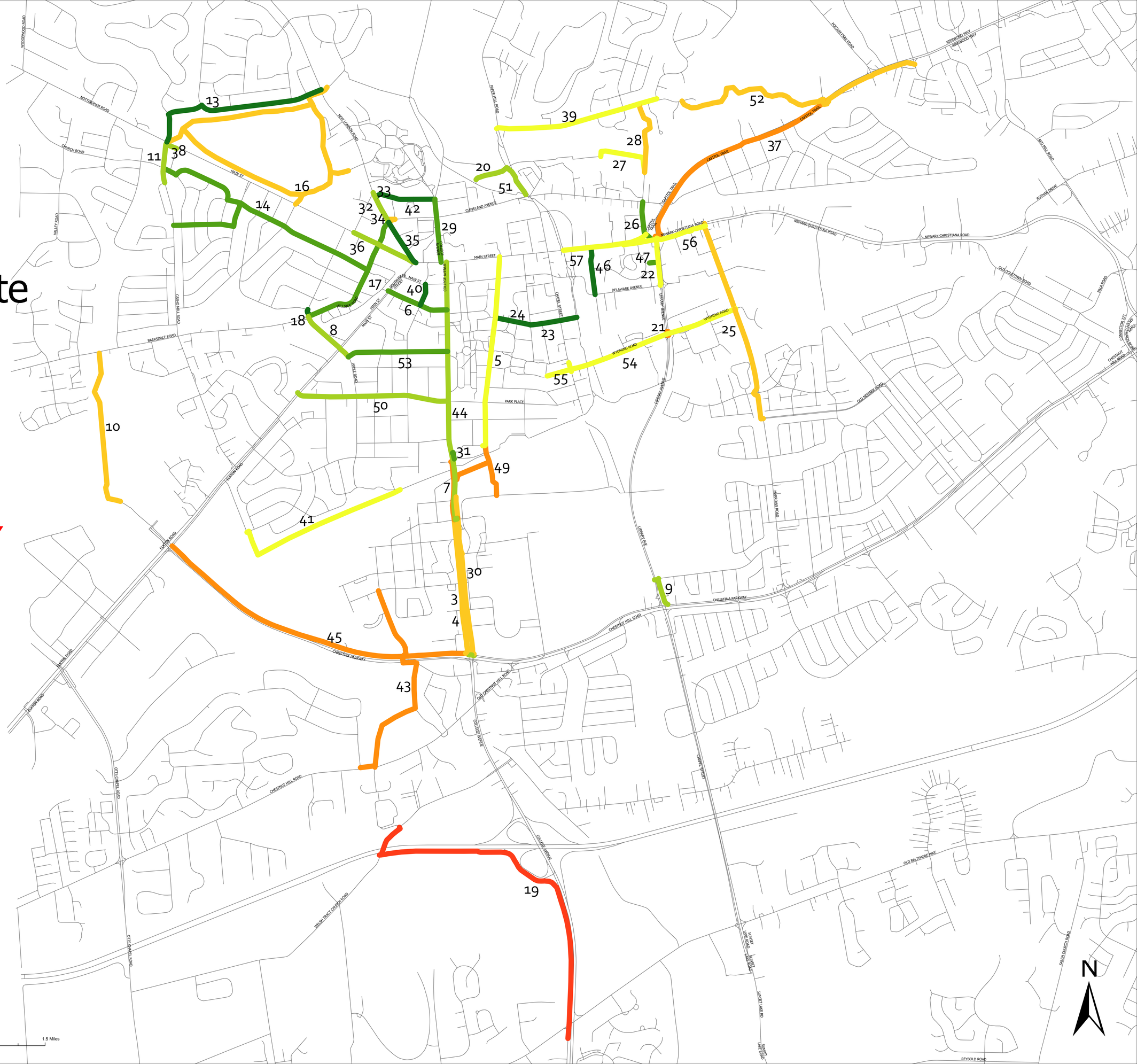
PROJECT	PROJ_NAME	Facility	Proj_val	LTS_MAX
3	896 SB Pathway	Pathway	3 - 896 SB Pathway	1
4	896 SB PathwayImprovements	Pathway	4 - 896 SB PathwayImprovements	1
5	Academy Street Traffic Calming	Bicycle Boulevard	5 - Academy Street Traffic Calming	1
6	Amstel Bikelane	Bikelane	6 - Amstel Bikelane	1
7	Amtrak Bridge	Pathway	7 - Amtrak Bridge	1
8	Apple Road Sidepaths	Separated	8 - Apple Road Sidepaths	1
9	Brookside SR72 Midblock Crossing	Intersection Improvement	9 - Brookside SR72 Midblock Crossing	1
9	Brookside SR72 Midblock Crossing	Pathway	9 - Brookside SR72 Midblock Crossing	1
10	Casho Mill Bypass Pathway Improvements	Pathway	10 - Casho Mill Bypass Pathway Improvements	1
11	Casho Mill Pinch Point	Separated	11 - Casho Mill Pinch Point	1
13	Country Club Sharrows	Sharrows	13 - Country Club Sharrows	1
14	Dallam Bikelane	Bicycle Boulevard	14 - Dallam Bikelane	1
16	Golf Pathway	Pathway	16 - Golf Pathway	1
17	Hillside Bikelane Improvements	Bikelane	17 - Hillside Bikelane Improvements	1
17	Hillside Bikelane Improvements	Bikelane	17 - Hillside Bikelane Improvements	2
18	Hillside Connector	Pathway	18 - Hillside Connector	1
19	Iron Hill Bikeway	Pathway	19 - Iron Hill Bikeway	1
20	Kershaw Connector	Pathway	20 - Kershaw Connector	1
21	Library Ave Protected Intersection	Intersection Improvement	21 - Library Ave Protected Intersection	1
22	Library Ave Sidepath Extension	Pathway	22 - Library Ave Sidepath Extension	1
23	Lovette Bike Boulevard	Bicycle Boulevard	23 - Lovette Bike Boulevard	1
24	Lovette Bikelane	Bikelane	24 - Lovette Bikelane	1
25	Marrows Road Pathway	Pathway	25 - Marrows Road Pathway	1
26	McKees Bikelane	Contra-flow Bikelane	26 - McKees Bikelane	1
27	McKees Creek View Connector	Pathway	27 - McKees Creek View Connector	1
28	McKees OPM Bridge	Pathway	28 - McKees OPM Bridge	1
29	N College Ave Bikelanes	Bikelane	29 - N College Ave Bikelanes	1
30	NB 896 Pathway Improvements	Pathway	30 - NB 896 Pathway Improvements	1
31	NEC Bridge Access Improvemnts	Pathway	31 - NEC Bridge Access Improvemnts	1
32	New London Bikelane	Bikelane	32 - New London Bikelane	2
33	New London Crossing Islands	Intersection Improvement	33 - New London Crossing Islands	1
34	New London Protected Intersection	Intersection Improvement	34 - New London Protected Intersection	1
35	New London Sharrows	Sharrows	35 - New London Sharrows	2
36	Nottingham Bikelane	Bikelane	36 - Nottingham Bikelane	2
37	Old Capitol Trail Sidepath	Pathway	37 - Old Capitol Trail Sidepath	1
38	Old Casho Mill Intersection Approach Connector	Pathway	38 - Old Casho Mill Intersection Approach Connector	1
39	Old Paper Mill Road Pathway Improvement	Pathway	39 - Old Paper Mill Road Pathway Improvement	1
40	Orchard Bikelane	Bikelane	40 - Orchard Bikelane	1
41	Pomeroy Trail Ext	Pathway	41 - Pomeroy Trail Ext	1
42	Ray St contra-flow bikelane	Contra-flow Bikelane	42 - Ray St contra-flow bikelane	1
43	Rittenhouse - STAR Connector	Pathway	43 - Rittenhouse - STAR Connector	1
44	S College Ave Bikelane	Bikelane	44 - S College Ave Bikelane	2
45	SR4 Pathway Reconstructed	Pathway	45 - SR4 Pathway Reconstructed	1
46	Tyre Ave Bikelanes	Bikelane	46 - Tyre Ave Bikelanes	1
47	Tyre Ave Connector	Pathway	47 - Tyre Ave Connector	1
49	UD NEC Vineyard Bridge	Pathway	49 - UD NEC Vineyard Bridge	1
50	W Park Place Bikelane	Bikelane	50 - W Park Place Bikelane	1
51	WCC Bridge Connector	Pathway	51 - WCC Bridge Connector	1
52	WCC Old Paper Mill Pathway	Pathway	52 - WCC Old Paper Mill Pathway	1
53	Winslow Bicycle Boulevard	Bicycle Boulevard	53 - Winslow Bicycle Boulevard	1
54	Wyoming Road Bikeway	Separated	54 - Wyoming Road Bikeway	1
55	Wyoming/Chapel Intersection Improvements	Intersection Improvement	55 - Wyoming/Chapel Intersection Improvements	1
56	273 Pathway to Marrows Road	Pathway	56 - 273 Pathway to Marrows Road	1
57	Main St, McKees connector	Protected Bikelane	57 - Main St, McKees connector	1

Cost_Estimate

CostEst

- $0 - $100K
- $100K - $500K
- $500K - $1M
- $1M - $2.5M
- $2.5M - $5M
- $5M - $10M
- > $10M

PRELIMINARY



Newark TID Bicycle Network Improvement Proposals v1
Paul Moser
paul.moser@delaware.gov
DelDOT Planning

0 0.15 0.3 0.6 0.9 1.2 1.5 Miles

BikeNewark's improvement issues for Newark TID project priority

PRIORITY as of 3/9/21 (Note: numbers in parentheses relate to map/spreadsheet provided by DelDOT's Paul Moser)

1 Revamp Wyoming Road with possible two-way protected bikelanes and reconstructed intersections.* (21, 54 , 55)
2 Develop a concept, plan, and subsequent project that will enable bicyclists to safely and conveniently bike from south of the South College Avenue bridge onto the James F. Hall Trail. (7, 31)
3 Make South College Avenue low stress within city limits, including access to/from STAR Campus. Apply striping for bicycle lanes, where missing, on South College Avenue between bridge and Delaware Avenue so that there are visibly continuous lanes northbound and southbound. (3, 4, 30, 44)
4 Find a safe, bicycle-efficient solution for low-stress connectivity on the block of Casho Mill Road between Nottingham Road and Church Road. Vehicles are currently allowed to obstruct the bike lanes on either side of the road, creating a less-than-safe "pinch point" for young students who bike to John R. Downes Elementary School from neighborhoods north of Nottingham Road. This would greatly enhance the effectiveness of the school's Safe Routes to School project (with DelDOT) along Casho Mill Road, which is to be completed soon. (11)
5 Improve bikeability on Lovett Avenue between South Chapel Street and Academy Street. (23, 24)
6 Create bike/ped pathway from Pomeroy Trail through Kershaw Park and along utility right-of-way to link to planned Emerson Bridge project bike/ped pathway (part of "phase 3" of Newark Bikeways low-stress bicycle network planned Northeast Bikeway). (20)
7 Create midblock crossings, including at David Hollowell Drive/New London Road and Winslow Road/South College Avenue.
8 Convert Olan Thomas Park sidewalk along Paper Mill Road to 10-foot bike/ped pathway to link Pomeroy Trail to planned Emerson Bridge project bike/ped pathway.* (51)
9 Create bike lanes along Apple Road bridge, from South Main Street to Barksdale Road. (8)
10 Create contraflow bike lanes on low-stress one-way Ray Street and McKees Lane to enhance bicycle connectivity choices that would help bicyclists avoid higher-stress intersections that have no provisions for bicyclists. (26, 42)
11 Improve Library Avenue bike/ped pathway and extend it from Delaware Avenue to East Main Street. (22)
12 Create a pathway from Rittenhouse Trail to UD STAR Campus. (43)
13 Employ more consistent and prominent usage of sharrows in critical areas (e.g., New London Road between West Main Street and Cleveland Avenue, Hillside Road between West Main Street and New London Road). (35)
14 Utilize McKees Lane north of Cleveland Avenue as a conduit, and negotiate a right-of-way trail behind car dealerships to Creek View Lane and build a bike/ped bridge over White Clay Creek to connect to Old Paper Mill Road through city parkland. (27, 28)
15 Reconstruct the SR4 pathway. This will become an important off-road conduit from the Southwest Bikeway to the STAR Campus and Rittenhouse Park. (45)
16 Identify a low-stress route or create a low-stress amenity that will serve Old Capitol Trail (Kirkwood Hwy.) in Newark from Cleveland Avenue to Windy Hills entrance. (37, 52)
17 Add bikelanes to block of North College Avenue between Cleveland Avenue and Ray Street. (29)
18 Improve and extend Old Paper Mill Road off-road pathway. (39)
19 Improve Hillside Road/Old Oak Road connector pathway. (18)
20 Create Marrows Road off-road pathway. (25)
21 Make Dallam Road (including Lafayette Road and Baylor Drive) a bicycle boulevard. (14)
22 Make Country Club Drive a bicycle boulevard and add sharrows. (13)
23 Make Winslow Road a bicycle boulevard. (53)
24 Add bikelanes to West Park Place and possibly on East Park Place post-rehab. (50)

The following projects involve City of Newark cooperation only but are of critical importance to Newark Bikeways.

- Install Newark Bikeways low-stress bicycle network "phase 2" wayfinding signage (connecting three new segments to the Central Loop Bikeway).*
- Allow bicycles to turn right from Amstel Avenue onto Orchard Road (i.e., either remove the prohibition for all vehicles or install an "Except Bicycles" sign). This is a critical intersection of the Newark Bikeways Central Loop and "phase 2" West Bikeway.
- Enable wayfinding for "phase 3" segments of Newark Bikeways low-stress bicycle network to be coordinated with construction schedule of existing and planned DelDOT and City of Newark infrastructure projects (i.e., Southwest Bikeway and DelDOT's Elkton Road project, Northeast Bikeway and City of Newark's Emerson Bridge project, South Bikeway and DelDOT's rehab of Delaware Avenue with bicycle amenities, and East Bikeway and Wyoming Road project).

*also part of the New Castle County Bicycle Plan (endorsed May 7, 2020)

BikeNewark
Moving Bicycling Forward in Newark, Delaware